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WITHIN four miles of Washington City there have been recently opened two well developed soapstone quarries which evidently had been worked at some former time by the people who dwelt in this neighborhood. Of this fact the excavations themselves, to say nothing of the numberless fragments of steatite pots and dishes, and the implements of stone and quartz used in fashioning them, furnish the unmistakable proofs. Notwithstanding the quarries are situated so near the city and convenient of access, they do not seem to have attracted any notice until the summer of 1874, when it was my good fortune during a half-aimless stroll, to stumble upon a curiously shaped moss covered stone which, upon examination, proved to be a fragment of a soapstone mortar. Recognizing the importance of the "find," and concluding from the size and weight of the specimen that it had not wandered far from the place where it was manufactured, I at once began to search for the original quarry, and was soon rewarded by the discovery of an immense deposit of the same material, on a thickly wooded hillside near by. A close examination of the locality showed that the entire hill was composed of soapstone, partly covered with ferns, fallen leaves, and the accumulated *débris* of centuries. Hundreds of fragments cropped out through the leaves, nearly every one of which showed well defined traces of having been worked by the ancient owners of the quarry. In an hours' search I found several well preserved dishes which I concealed, intending to return at an early date to remove them. Shortly after, I changed my quarters to the city, and from that time till this last summer, professional duties and a rare opportunity to collect Indian implements in another direction, have taken up all my time.

The discovery of the soapstone quarry at Chulu, Amelia Co., Virginia, and the subsequent interesting investigation of the same, by Mr. Frank H. Cushing of the Smithsonian Institution, led me to communicate to Professor Baird the existence of the Rose Hill quarry on Broad Branch. He replied at once, inviting me to make an early visit to the mine in company with Mr. Cushing, who at that time was still absent in Virginia. On his return, we visited the locality, and in a short time succeeded in finding a profusion of broken and unfinished implements.

Our brief visit demonstrated the fact that, from an archæological point of view, the quarry was superior to any similar deposit, so far as known, in the country. We discovered the remains of no less than seven well defined shafts or excavations, leading into the hill, whence the early potters had procured a quality of rock superior to that found on the surface.

A few days later, we paid another visit to the locality, in company with Dr. Charles Rau and several other distinguished attachés of the Smithsonian Institution. At the quarry we separated into groups and proceeded to make a thorough and careful survey of the hill and country immediately surrounding it.

With the exception of the southern side, the whole hill is made up entirely of soapstone. About midway from top to bottom, on the southeast angle, are the remains of an old shaft, formed by the Indians for the purpose of testing the quality of the stone — which at this point changes into a coarse, granitic looking rock which is now being quarried by the neighboring farmers. From the stream at its northern base, I should judge that the hill is about seventy-five feet high, by six hundred feet in length and three hundred feet in breadth, at its base. In general outlines it somewhat resembles a truncated pyramid. The soapstone on the surface is mostly in fragments, and covers the eastern, northern, and western sides, and a portion of the exposed summit.

On the northern side it descends to the creek at its base, passes entirely under it, ascends and swells out into a distinct quarry of more than three times the size of the former. The creek which forms the dividing line, runs for hundreds of feet over a beautiful greenish-gray floor of soapstone, worn into ruts and pools by the sand and pebbles brought down from the adjacent field during the spring and autumn floods.

A tolerably thick growth of beech and oak is scattered over the hill on all sides. While intervening space is covered with ferns, and random patches of huckleberry bushes which have found a foothold among the rocks.

The excavations previously mentioned were found to be in a good state of preservation, considering the long lapse of time since they were worked by the natives. One shaft we found to be over three feet deep, in spite of the long-continued wash from the hillside above.

In addition to the shafts and other interesting features of aboriginal labor, we were fortunate enough to find several hundred dishes, more or less broken, besides a number of picks and hammer-stones, and also one or two steatite spades used in cutting and removing the earth when opening a shaft into the quarry.

Since beginning operations, in addition to digging out and carefully studying the workings of one of the ancient shafts, Mr. Cushing has selected and removed more than two tons of implements from the quarry, and when I visited the locality last I found at least two tons more awaiting transportation. In the half barrel of specimens that I send you (P. M. Nos. 16075–16091), it will be observed that I have discriminated in favor of those articles which would best give you an idea of the different patterns, their size and shape; the degree of thinness to which reduced, and particularly of those exhibiting the grooves and furrows produced by the stone pick, in their fabrication. Whilst aiming to make the contribution as interesting as circumstances would permit, I cannot help but regret that the lateness of the season prevents the success, in your behalf, that I am sure to meet with in the spring.

In selecting masses of soapstone, the natives seem to have been guided by the quality of the material and the size and use of the dish required. Some of the partially finished blocks are high and massive with thick walls and bottoms, which seem to indicate that a mortar was intended. A broad, shallow dish, with a slightly elevated rim and a thick bottom, could have been used only as a grinding implement, in conjunction with flat stone mullers, or broad bottomed pestles. In this shape, no such solidity as is shown in the mortars, was needed, as the mullers were used in a "holy-stoning," or rotary manner.

From the fact that, on several occasions, I have found comparatively thin and well finished fragments of soapstone dishes in the ancient camping grounds on the Anacostia river, near Bladensburgh, Md., fully ten miles from the nearest quarry, and among the shellheaps on the Wicomoco river in St. Mary's County, Md., seventy-five miles south of this city, and also from the entire absence — so far as my observations have gone — of artistically finished dishes near the mine, I have come to the conclusion that the dishes were not finished entirely at the quarries, but were simply blocked out and partially reduced in size and weight, in order to facilitate transportation to remote encampments.

The majority of the dishes found, thus far, are oblong, and reasonably symmetrical, considering the tools with which they were wrought. Nearly all are supplied with handles at the ends, which are nothing more than ear-like projections, from three-fourths of an inch to an inch and a half in length. In one or two instances I have found a dish with one ear at the top, and the other at the bottom of the opposite end. Why this apparently whimsical deviation was made I am unable to conjecture, unless, in finishing the dish, one ear at the top had been accidentally broken off, and to replace it, a duplicate had to be formed from the unfinished mass at the bottom. The thought also presented itself, that this handle near the bottom may have been made purposely, in order to assist in tipping a heavy mortar to one side to facilitate the removal of its contents after being ground. This is, I admit, a rather strained and far-fetched idea, but, in the absence of anything better, I offer it as a suggestion.

I invariably found a score or two of the oblong pattern, to one of any other. Nos. 16078, 16081, and No. 16089, Peabody Mus. catalogue, are good specimens of this class; the latter of which shows one well finished ear. Nos. 16075, 16082, and 16088, belong to the "oblong" but differ somewhat from the regular pattern, in being "tureen" shaped, and lighter and more graceful in design. The only advantage to be derived from this shape, exclusive of its superior attractiveness, was, I conjecture, in a lightness and consequent additional convenience attending frequent removals.

A circular dish of a gallon capacity would be not only exceedingly heavy, but decidedly awkward and unhandy to carry; whereas, an oblong dish, deeply excavated and presenting less surface at the bottom, could be made much thinner and lighter in proportion to its capacity, than the former.

The smallest dishes found, so far, are mostly circular, or with a slight deviation in favor of the oval, and by reason of their size and consequent lightness show more artistic workmanship. The number of small dishes met with, is surprisingly out of proportion to the large number made to hold from two quarts to one or two gallons. The smallest yet found will not hold more than a quarter of a pint; while the largest fragment I have seen belonged to a vessel which, if complete, would probably hold nearly seven gallons.

With reference, again, to the smallest dishes, I can account for their absence only on the supposition that, domestic utensils of such diminutive size were, of course, unfitted to cook in; and further, that for all ordinary purposes, woven baskets, "pitched within and without," or the ordinary coarse clay pottery took their place.

The first operation after the stone was taken from the quarry, was to block out the mortar or dish, and finish it externally, before proceeding to cut away and smooth down the inner side. This method was adopted in almost every instance, and in the numberless cases met with, I have observed but two bowls that were finished inside, whilst the rough angles on the outside remained untouched.

No. 16075 is a reasonably fair type to illustrate the first stage of development; but from exposure to the elements it lacks the usual pick marks or grooves. It shows that, while the outside is as nearly finished as the occasion required, the interior has undergone but little change. No. 16088 belongs to the same group, and shows in an excellent manner, the external grooves lacking in No. 16075. Both of these vessels are "tureen" shaped, and about the same in size, weight, and capacity. The latter, No. 16088, I dug out of the hillside during my last visit to the quarry. It was covered with leaves and earth, with the exception of one corner, which projected above the surface. It owes its excellent state of preservation to the earth which covered it since the day it was accidentally broken whilst being finished internally.

We now come to the inside of the dish, or, more properly speaking, to the surface from which the digging out, or excavating, begins. The pick is now brought into use, and after a tedious operation the bowl is formed in the following manner: commencing at what is to be the outer rim of the dish, a series of sloping cuts are made, all tending *downward and inward toward the centre.*

By "a series of cuts" I do not wish to infer that it was done with a hafted implement or one with a broad cutting edge, but rather, by a pointed and somewhat flat-edged *pick used as a chisel* and driven by sharp and well directed blows from a heavy stick, or mallet. These sloping cuts are continued till the circuit of the dish has been completed; the operation is then changed, the cuts being directed *downward and outward toward the rim.* In this manner a *V* shaped trench is soon formed around the upper surface of the block. The chisel is again reversed and the operation repeated as before, with this exception: whenever the cutting is toward the centre, the pick is placed in the *bottom* of the trench and driven still further downward, care being taken not to damage the rim by too heavy a blow on the chisel. When it becomes necessary to cut outward again, the chisel is carried to the *top* of the dish each time, and the central mass sliced down in a comparatively easy manner. Finally, nothing remains but a cone-shaped projection which is speedily removed by a few well directed blows, and the irregular sides are scraped and polished till the dish is ready for use. It may be surmised that this is only a conjectural mode of excavating these dishes; but this is not the case by any means, as I have in my collection two exceedingly handsome specimens showing perfect finish externally, while the inside of one is partially excavated after the fashion indicated though not carried out so fully in all the details. A great deal of care evidently was required even in so simple a matter as removing the "core," judging by the numerous fragments which all bear evidence of having been nearly completed, when an untimely blow unexpectedly brought the labor of a day to naught, and verified the old adage that "There's many a slip betwixt the cup and the lip."

Another dish is deserving of special mention, although, I regret to say, it is probably lost beyond recovery. This is to be regretted, as it was the second of the only specimens I have ever seen that were finished on the inside without any trace of workmanship exteriorly. It was formed from a triangular block of deep green soapstone, was quite well finished and had undoubtedly been used as a mortar. The sides and bottom were very thick and the whole very heavy; much more so than ordinary soapstone. A dish of this class could be finished much more quickly inside, than the other, yet I doubt whether any time or labor could be saved by the operation, for the same patient care would be necessary in chipping away the outside, to avoid an accidental fracture of the dish before completion.

No 16086 appears to have been the end of a well shaped oblong dish. The corners are evenly rounded and it has a circular projection at the end, to serve as a handle.

No. 16080 is a fragment of an unusually large vessel. The lateral curve is very gradual, which would seem to indicate a capacity of several gallons. The thickness is uniform, excepting a portion of the rim which swells out into a well defined "shoulder" on the outer margin; but as this is hardly large enough for a handle, it was probably left to facilitate its use.

No. 16077 is a remarkably well formed and well finished fragment. It bears a close resemblance to the wide, shallow milk-pans and has a suggestive and familiar appearance.

Amongst the remaining fragments, each possesses some characteristic not entirely common to the others, yet not of sufficient importance to mention individually.

Thus far I have confined my description to the southern quarry discovered in 1874. It is now necessary to consider the larger one on the northern side of the stream.

This quarry is a continuation of the other—or, more properly speaking, this being the larger, the other is simply a straggling offshoot. The hill, roughly estimated, is about one hundred and fifty feet high, with the largest slope toward the east. On this side it descends somewhat abruptly for about a hundred feet from the apex, and then extends eastward on nearly a dead level, till the extremity of the quarry is reached, when it falls suddenly into a cultivated field. The northern side slopes away gradually and ends in a narrow ravine, the mutual boundary of this, and another hill beyond. The western side descends evenly, gradually, and loses itself in a belt of pines at its base. The southern side slopes abruptly, and is bounded by the stream. A thick forest of white oak covers the whole hill, which, probably, has an area of about forty acres.

The soapstone is found very sparingly on the eastern side; there is none on the southern, but on the northern and western sides it crops out abundantly. The summit extends north and south a distance of about twenty-five or thirty paces, and nearly the whole surface has been "burrowed" into, and furrowed by the "ancients." in search of the much desired potstone.

The trench runs along the centre of the quarry and dips over the northern shoulder of the hill, The earth has been thrown out on each side and at one time must have presented quite a military appearance with a high embankment on each hand. The excavation is now about two or three feet below the partially surrounding surface. Large trees grow in the shaft which shows unquestionable evidence of having been one of the first excavated.

The fragments of dishes found here, and the rock itself, all indicate an extremely venerable age; and I think, with excellent reason, that at least four hundred years must have passed over this hill since it was mined to any extent. An air of extreme antiquity lingers about these relics of a rude, but highly interesting race, whose descendants are each day being pressed closer to the wall in their ceaseless struggle with the civilization of the east. The implements found here, exclusive of their shape, show no trace of human workmanship. The broken pots are covered with moss and lichens which have found social companionship in the worn and weathered fragments. Those that have escaped the moss, look worn and faded, and if in a volcanic district would readily pass for slag and scoriæ. The bluish-gray color is gone, and a reddish-brown has taken its place; while the soft, slippery feeling, which is so characteristic of the stone, has disappeared entirely, leaving a rough, harsh surface, like coarse sandstone. No. 16085 is the only fragment sent from this quarry. It belonged to an upright dish, and, to one not familiar with the subject, would readily pass for a simple fragment without anything special to recommend it to notice, so completely has it lost every trace of the chisel.

As to the age of these quarries nothing definite will, probably, ever be known. It seems reasonably certain that neither has been worked to any extent since the settlement of the whites at St. Marys and Jamestown; and as the utensils manufactured out of the material taken from the later quarry, after the lapse of six or seven generations, still retained the marks of the tools with which they were shaped, I not unnaturally concluded that those specimens in which the evidence of human workmanship was almost obliterated, were of much greater antiquity. But this opinion has been somewhat modified, as in comparing their respective ages, one important feature, not noticed in my earlier visits, probably has a tendency to militate against the ancient appearance of the elder mine. I have already remarked the faded and honeycombed appearance of the material found in and about the excavations of this quarry. These features, I considered, were the natural results of time and exposure; but I am now satisfied, from a critical examination, that the appearance referred to, is, in part, to be ascribed to the inferiority of the material used. In breaking open fragments of the rock, I find in many, a series of cellular cavities, at irregular intervals, filled with what appeared to be oxide of iron — a spongy looking, reddish-brown powder easily removed from the cavities with the point of a pencil. This was undoubtedly the cause of the early abandonment of this quarry. It was utilized until the southern hill was found to contain a better quality of mineral and then it was abandoned. I think it probable that, at a remote period of time, the newer quarry was entirely concealed by a thick stratum of earth, and I base my idea on the fact that, whenever a portion of the fragments (which cover the whole northern side) is removed, the solid earth appears, with no indications that the ledges approach the surface. I have found places where this rule would fail, and merely mention it in order to correct the impression I once had that the undisturbed rock cropped out at every point on the surface. With reference again, to the recently discovered quality of the soapstone in the northern quarry, it may be thought that my explanation is superfluous; but as these "notes" are for the eyes of the public, I am unwilling to have any statement, however trivial, go abroad that would have a tendency to mislead others.

I have omitted to mention in its proper place that the only excavation found in the northern quarry, exclusive of the large trench on the summit, is situated in the southwestern declivity of the hill, about forty feet above the stream. It is in a much better state of preservation than any in the southern quarry, which is owing entirely to its secluded location. This excavation runs east and west parallel with the creek. It is ten feet long, by from four to six in width, and is between two and three feet deep. The earth from the interior was thrown out below, and at an early period must have formed an embankment of some magnitude. As no fragments of stone or unfinished implements are found in the immediate vicinity, I am led to believe that this shaft was not worked to a successful issue.

One more class of implements yet remains to be mentioned, in connection with the manufacture of soapstone bowls and mortars. These, in most works where they are introduced, are classified as "picks," and they were ordinarily used as such in getting out blocks of the material, and in roughly cutting away the superfluous portions; but in all subsequent operations I think that they were unquestionably used as chisels.

The picks sent you have undoubtedly been much worn and dulled at the points, and were used for ordinary work; while the regular chisels were much smaller and sharper, and in some instances of a different quality of stone. The picks were found scattered about at random all through the quarry, and in one of the shafts that has been reopened. They weigh from a few ounces to several pounds, according to the use required. The material from which they were usually made is a variety of discolored quartzite, found abundantly in certain localities in this vicinity. Little labor or skill was required in forming them, as they were simply splintered down from a larger mass, with a little additional chipping to give them a sharp cutting point, or blade.

If we examine any well formed fragment it will be seen that, however skilful or proficient an aboriginal workman might have become, it was utterly out of the question to drive a deep, extended groove from top to bottom of a large mortar; whereas, on the other hand, the long, deep seated furrows are exactly the result to be expected from a sharp pointed chisel with a good cutting edge.

On the western side of the hill, near its base, in a thick grove of pines, I found several large boulders of quartzite, from which material many of the picks were undoubtedly obtained. Scattered about among the trees, were several dozens of those rudely formed implements which had been splintered off the boulders and never utilized. It is difficult to imagine how these large masses were splintered down without the free use of iron tools, as a heavy blow on one of them from an ordinary hafted stone hammer would splinter the latter into fragments. Possibly the Indians may have succeeded in detaching flaky masses by long repeated and monotonous taps, after the boulders had been thoroughly heated and brought to a sudden chill.